







Work Order ID 51705

August 28, 2009 6:51:41 AM


Page 1


Item ID: D2356-042	Accept		Setup	Start	
Revision ID: E				Stop	
Item Name: Low Float Step Ass'y RH					
Start Date: 8/31/09	Start Qty: 4.00		Cust Item ID:		
Required Date: 9/11/09	Req'd Qty: 4.00 <i>5.00</i>		Customer:		
Reference:					


Approvals:	Process Plan: <i>[Signature]</i>	Date: <i>09-09-24</i>	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr								
D2356	Rev E								


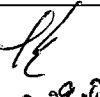

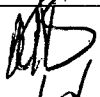
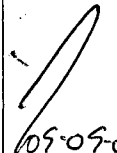

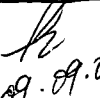
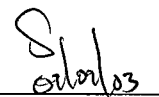

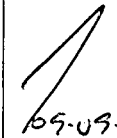

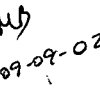
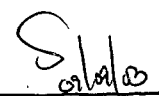

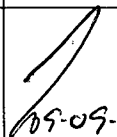
100		0.00				<i>(5X)</i>	<i>(1X)</i>		<i>(10)</i>
	Large Fab					<i>[Signature]</i>			<i>(PTO)</i>
Large Fab	Memo	0.00							
Large Fab	Cut D2356-2 from D2244 extrusion as per Dwg D2356 using cutting table setup DT 8185-L <input type="checkbox"/> Drill D2365-2 as per Dwg D2356 using Jig DT 8230 <input type="checkbox"/> Bend per Dwg D2356 using Bend Program D2356.2D and Folio F1012 <input type="checkbox"/> Deburr and bevel ends for welding								

110	QC5- Inspect part completeness to step on W/O	0.00				<i>(5)</i>	<i>(+1)</i>	<i>(5)</i>	
									
QC	Memo	0.00							
Quality Control						<i>(5)</i>			

120		0.00				<i>5</i>	<i>[Signature]</i>		
	Large Fab								
Large Fab	Memo	0.00							
Large Fab	Weld end cap and bracket as per Dwg D2356 using Jig DT <input type="checkbox"/> Grind end cap weld flush Remove all sharp edges from weld on bracket <input type="checkbox"/> See sample DT 8245								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2356-042 PAR #: 09-031 Fault Category: Prod - Large Fab NCR: Yes No DQA: 1 Date: 09-11-03
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: 1 Date: 05-11-18

NCR: S1705 B		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09-09-01	100	Qty 10 steps are scrap. Steps kept breaking in the bender, at the most aft hole location. This was caused because there was 8 holes drilled in the step, instead of 6 per dwg. Steps	 09/09/02 Q21042	Paint the 2 (9) holes aft section of the DT8230 drill jig red, and rivet an I.D plate unit to advise the fabricator to not use for D2356-041/-042	 09-09-03	 09/09/03	 09/09/02 Q21042	 09-09-02
		were inspected prior to bending by QC. The dwg i.w/o calls up the correct drill jig, BUT the DT8230 jig also has 8 holes that are scribed for the appropriate steps.	 09-09-02	steps, and I.D the appropriate steps, per new. See PAR 09-031 Qty 10 are scrap: to be destroyed. Replace B/N: <u>B38023</u>	 09-09-03	 09/09/03	 09-09-02	 09-09-02
		R.C: Lack of Attention to drawing details.	 09-09-02	Re-do bend program to be able to bend the steps correctly. Retrain QC & Fab to ensure to verify parts → dwg.	 09-09-03 →	 09/09/03	 09-09-02	 09-09-02

NOTE: Date & initial all entries

PAR 09-031 raised to make new jig.

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Item ID: D2356-042

Accept

Revision ID: E

Item Name: Low Float Step Ass'y RH

Setup Start

Stop

Start Date: 8/31/09 Start Qty: 4.00

Required Date: 9/11/09 Req'd Qty: 4.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

Stop

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



QC

Quality Control

QC9- Inspect visual per QS1004- Fusion Welds

0.00

Memo

0.00

AD

09.10.13

(P12) 7

140



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

2) 809/10/13

(45)

f

150



Large Fab

Large Fab

Large Fab

Memo

Rivet as per Dwg D2356

0.00

0.00

P12 09.10.14

5

φ

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2356-042 PAR #: N/A Fault Category: Large Fab NCR: Yes No DQA: ll Date: 09-11-03
 Resolution: Scrap Disposition: Scrap. QA: N/C Closed: ll Date: 09-11-03

NCR: <u>51705</u> <u>A</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>11/3</u>	<u>100</u>	<u>one step over bent during Bending Process - first step. R.C. Process / when re-adjusting the bend program from previous NCR.</u>	<u>ll</u> <u>09/11/03</u>	<u>Scrap and Destroy no further extra work cut.</u>	<u>MS</u> <u>09-09-03</u>	<u>S</u> <u>09/09/03</u>	<u>ll</u> <u>09/11/03</u>	<u>S</u> <u>09/11/03</u>

NOTE: Date & initial all entries

Work Order ID 51705

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Item ID:	D2356-042	Accept		Setup	Start	
Revision ID:	E				Stop	
Item Name:	Low Float Step Ass'y RH					
Start Date:	8/31/09	Start Qty:	4.00	Cust Item ID:		
Required Date:	9/11/09	Req'd Qty:	4.00	Customer:		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00				(X5)	4		

Quality Control

2) 8/21/14

=> tired step on helicopter 09/10/13

170	Chemical Conversion Coat per QSI005 4.1	0.00							
HandFinish	Memo	0.00				5	0		

Hand Finishing

Weld as per dwg End cap

PD 09.10.13

180	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
Powdercoat	Memo	0.00				(X5)	4		

Powder Coating

QC 9 inspect weld

QSS inspect work to current step -> 8/21/14

M 11/2/200

START TIME: 10:00

FINISH TIME: 10:30

OVEN TEMPERATURE: 320°

PD 09.10.14

09-10-16

Pressure wash

Touchup slotline

09/10/16

09/10/16

X5

X5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2356-042 PAR #: N/A Fault Category: Finishing **NCR:** Yes No DQA: 18 Date: 09-11-23
 Resolution: Re-work Disposition: Re-work QA: N/C Closed: 7 Date: 07-11-18

NCR: <u>51705</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09-10-19	180	SAWED DOWN 320 GRIT TOUCH UP ALUMINE PER CSI 005						
09-10-19	180	RECOAT RE COAT						
09-10-19	180	SCRATCH FROM MATERIAL		SAWED DOWN 320 GRIT TOUCH UP ALUMINE AND RECOAT WHITE PER CSI 005	MD 09/10/19			
09-10-19	180	RL Process (not seen at inspection)	<u>ASD</u>	JART 12:05 OVER 320° FINISH 12:35	09-10-19 S 01/01/21		<u>ASD</u>	S 01/01/21






NOTE: Date & initial all entries



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Item ID: D2356-042 Accept  Setup Start 
Revision ID: E Stop 
Item Name: Low Float Step Ass'y RH
Start Date: 8/31/09 Start Qty: 4.00  Cust Item ID:
Required Date: 9/11/09 Req'd Qty: 4.00  Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start 
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190  HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 wing wozlk Memo BATCH: m112106	0.00 0.00		mo	09/10/19	15			
200  QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00		SP1	09/10/20	25			
210  Packaging Packaging	Identify as per dwg & Stock Location: Memo PDP 51590	0.00 0.00							8/22/22 (5)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			



NOTE: Date & initial all entries


Work Order ID 51705

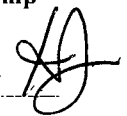
August 28, 2009 6:51:41 AM

Page 5

Item ID: D2356-042 Accept  Setup Start 
Revision ID: E Stop 
Item Name: Low Float Step Ass'y RH
Start Date: 8/31/09 Start Qty: 4.00  Cust Item ID:
Required Date: 9/11/09 Req'd Qty: 4.00  Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start 
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220 	QC21- Final Inspection - Work Order Release	0.00							
QC Quality Control	Memo	0.00							

09/10/23 
B/09/10-23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 28, 2009 6:51:40 AM

Page 1
2

Work Order ID: 51705

Parent Item: D2356-042RevE

Parent Item Name: Low Float Step Ass'y RH


Comments:

Start Date: 8/31/09

Required Date: 9/11/09

Start Qty: 4.00

Required Qty: 4.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS20600-AD4W3  Cherry Rivets		Purchased	No			100	Each	2,675.000	48.0000		09.10.14	

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST	2675
102929	37
104715	10
106375 = 60	628
107939	1000
111636	1000

D2244-116RevD1

Manufactured

No

120

Each

57.0000

4.0000



Step Extrusion

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST	57
33733 +3	3
38023 +5	54

120

Each

27.0000

4.0000

D2673-34RevB

Manufactured

No



End Plate

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST	27
36406	27

27

5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 28, 2009 6:51:40 AM

Work Order ID: 51705

Parent Item: D2356-042RevE

Parent Item Name: Low Float Step Assy RH


Comments:

Start Date: 8/31/09


Required Date: 9/11/09

Start Qty: 4.00


Required Qty: 4.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2643-1RevB1		Manufactured	No			150	Each	39.0000	4.0000			
<div>  </div>												
Lo Skid Step Assy LH												

Warehouse	Loc Qty	Loc Code
<u>Location</u>		
Premier		
Mezz	39	
16928	39	

D2643-2RevB1		Manufactured	No			150	Each	39.0000	4.0000			
<div>  </div>												
Lo Skid Step Assy LH												

Warehouse	Loc Qty	Loc Code
<u>Location</u>		
Premier		
Mezz	39	
16929	14	
9725	25	

D2849-1RevA		Manufactured	No			150	Each	28.0000	4.0000			
<div>  </div>												
End Bracket												

Warehouse	Loc Qty	Loc Code
<u>Location</u>		
Premier		
Mezz	28	
27873	21	
9423	7	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN KE	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. D2356	REV. E SHEET 1 OF 2
DATE 05.11.14		TITLE LOW FLOAT STEP ASSEMBLY	SCALE NTS
A	95.02.16	NEW ISSUE	
B	97.05.22	END CAPS CHANGED	
C	97.07.23	ADDED BUSHING AND FACING INFO	
D	98.10.13	CHANGED TO BEND, D2849 REPLACES D2358 & D2359, INCORP. DEO 9084	
E	05.11.14	UPDATE FINISHING NOTE	

WLO 51705

D2356 LOW FLOAT STEP ASSEMBLY PARTS LIST

Part No.	Description	QTY -041	QTY -042
D2356-041	Low Float Step Assembly (LH)	X	
D2356-042	Low Float Step Assembly (RH)		X
D2244-52.7	STEP EXTRUSION*	1	1
D2643-1	STEP LEG ASSEMBLY	1	1
D2643-2	STEP LEG ASSEMBLY	1	1
D2673-34	STEP END PLATE	1	1
D2849-1	END BRACKET	1	
D2849-2	END BRACKET		1
MS20600AD4W3	RIVETS	12	12

*cut per drawing

RELEASED
05.11.28

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

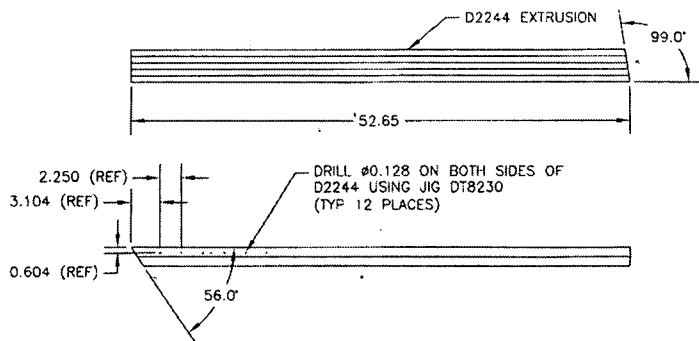
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

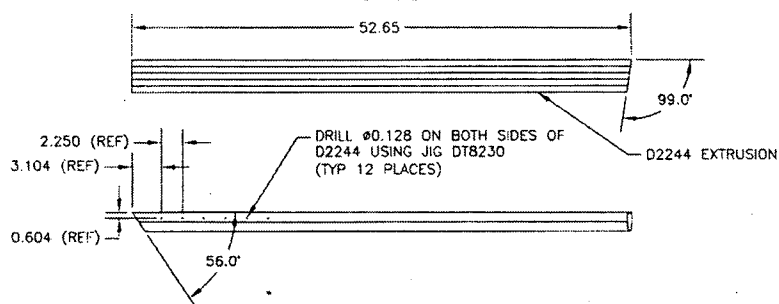
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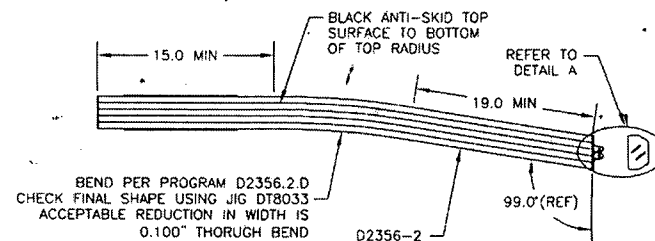
D2356-2 CUTTING/DRILLING DETAIL
RIGHT STEP



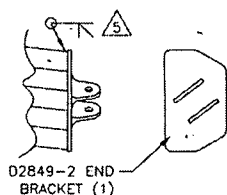
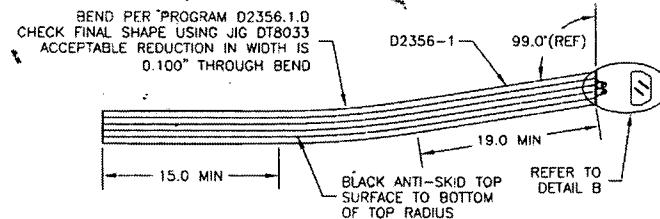
D2356-1 CUTTING/DRILLING DETAIL
LEFT STEP



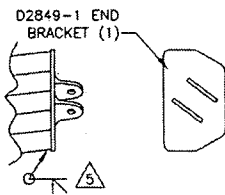
D2356-042 BENDING/ASSEMBLY DETAIL
RIGHT STEP



D2356-041 BENDING/ASSEMBLY DETAIL
LEFT STEP



DETAIL A
SCALE: 1:4



DETAIL B
SCALE: 1:4

D2643-2 STEP LEG ASSEMBLY (1)

D2643-1 STEP LEG ASSEMBLY (1)

GENERAL NOTES

- 1) WELD PER DART QSI 004
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

5) CHAMFER D2244 EXTRUSION 0.075"x45° BEFORE WELDING D2849-1 OR D2849-2 IN PLACE. DO NOT GRIND FLUSH

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DESIGN BW	DRAWN BY 04	DART	DART AEROSPACE LTD. MARKHAM, ONTARIO, CANADA
CHECKED [initials]	APPROVED [initials]	DRAWING NO. D2356	REV. E
DATE 05.11.14	TITLE LOW FLOAT STEP ASSEMBLY	SHEET 2 OF 2	SCALE 1:12

RELEASED
65-11-28

w/o 51705

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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